



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Adress: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,638	10/19/2006	Mitchell M. Jackson	3241-01	3878
26645	7590	12/28/2010	EXAMINER	
The Lubrizol Corporation			HINES, LATOSHA D	
29400 Lakeland Blvd.			ART UNIT	PAPER NUMBER
Wickliffe, OH 44092-2298			1775	
MAIL DATE		DELIVERY MODE		
12/28/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/595,638	<b>Applicant(s)</b> JACKSON ET AL.
	<b>Examiner</b> LATOSHA HINES	<b>Art Unit</b> 1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 September 2010.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-9 and 20-25 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-9 and 20-25 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1)<input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2)<input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-878)</li> <li>3)<input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br/>Paper No./Mail Date _____</li> </ol> | <ol style="list-style-type: none"> <li>4)<input type="checkbox"/> Interview Summary (PTO-413)<br/>Paper No./Mail Date _____</li> <li>5)<input type="checkbox"/> Notice of Informal Patent Application</li> <li>6)<input type="checkbox"/> Other: _____</li> </ol> |
|--|---|

#### **DETAILED ACTION**

1. This is the final rejection based on 10/595638 application filed on May 02, 2006.
2. Claims 1-9 and 20-25 are pending and have been fully considered. Claims 10-19 and 26-32 are canceled.
3. The rejection under 35 USC 112, 2<sup>nd</sup> paragraph, is withdrawn in light of applicants' amendments and remarks.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 1-9 and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over CARABELL et al. (US 2003/0172582).

CARABELL et al. ["Carabell"] discloses in paragraphs [0025]-[0029], a fuel additive composition comprising a Mannich condensation product of (1) a high molecular weight alkyl-substituted hydroxyaromatic compound wherein the alkyl

group has a number average molecular weight of from about 300 to about 5,000

(2) an amine, and (3) an aldehyde, wherein the respective molar ratio of reactants (1), (2), and (3) is 1:0.1-2:0.1-2.

Carabell discloses in paragraph [0056] that the preferred polyisobutenes used to prepare the presently employed polyalkyl hydroxyaromatic compounds are polyisobutenes which comprise at least about 20% of the more reactive methylvinylidene (high vinylidene) isomer, preferably at least about 50% and more preferably at least about 70% methylvinylidene isomer.

Carabell discloses in paragraph [0059] that the amine contains both a primary and a secondary amino group or two secondary amino groups. In paragraph [0064], Carabell discloses aldehydes such as formaldehyde used in the preparation of the Mannich.

Carabell discloses in paragraph [0033], a fuel composition comprising a major amount of hydrocarbons boiling in the gasoline or diesel range and an effective (minor) deposit controlling amount of a fuel additive composition. In paragraph [0034], Carabell discloses a fuel concentrate comprising an organic solvent. In paragraphs [0094] and [0095], Carabell discloses gasoline and diesel fuels containing fuel additives such as anti-knock agents, dispersants, and the like. In paragraph [0036], Carabell discloses a method of controlling engine deposits in an internal combustion engine by operating an internal combustion engine with a fuel composition. The examiner is of the position that independent

claim 1, amended in the response filed 01 June 2010 to a method of operating an internal combustion engine, is clearly taught by Carabell.

Carabell discloses in paragraph 0056, suitable polyisobutenes include those prepared using BF<sub>3</sub> catalysts.

The examiner is of the position a reference is good not only for what it teaches but also for what one of ordinary skill might reasonably infer from the teachings. *In re Opprecht* 12 USPQ 2d 1235, 1236 (CAFC 1989); *In re Bode* USPQ 12; *In re Lamberti* 192 USPQ 278; *In re Bozek* 163 USPQ 545,549 (CCPA 1969); *In re Van Mater* 144 USPQ 421; *In re Jacoby* 135 USPQ 317; *In re LeGrice* 133 USPQ 365; *In re Preda* 159 USPQ 342 (CCPA 1968).

In addition, "A reference can be used for all its realistically teachings and is not limited to the disclosure in its preferred embodiments" See *In re Van Marter*, 144 USPQ 421.

#### ***Response to Arguments***

7. Applicants' arguments previously filed 20 September 2010 have been fully considered but they are not persuasive.
  - a. Applicants argued that Carabell does not teach the PIB alkylated hydroxyaromatic compound derived by either: i) combining conventional PIB and high vinylidene PIB prior to the alkylation reaction, or ii) combining a hydroxyaromatic compound alkylated with conventional PIB and a hydroxyaromatic compound alkylated with high vinylidene PIB. The examiner disagrees. Applicants claim a process of making a PIB alkylated

hydroxyaromatic compound derived by components i.) and ii.). However, the product does not have to be made by this particular process. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Carabell discloses in paragraphs [0052-0057] various types of PIB alkylated hydroxyaromatic compounds including polyisobutylphenol and polyisobutenephensols containing a high percentage of methyl-vinylidene isomers. Carabell discloses in paragraph [0057], *various mixtures* of PIB, such as ULTRAVIS 10 which contains polyisobutylenes and high alkylvinylidene polyisobutylenes. Thus the examiner is of the position that the claimed Mannich condensates are taught by the prior art to Carabell. Additionally, it has been held that “It is *prima facie* obvious to combine two compositions, each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art.” *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

- b. The Applicants argued that the claims have been amended such that unexpected results have now been demonstrated to be commensurate in scope

with the amended claims. The examiner acknowledges that the type of Mannich reaction product of the claims has now been amended to the reaction product of PIB alkylated hydroxyaromatic compound, formaldehyde or a reactive equivalent thereof, and a secondary monoamine component comprising dimethylamine. However, the examples use only specific amounts high vinylidene and conventional PIB with dimethylamine or ethylenediamine. Additionally, the claims allow for a concentration amount of high vinylidene and conventional PIB with dimethylamine or ethylenediamine to be between 25:75 to 40:60 weight percent, while the inventive compositions contain specific amounts of high vinylidene and conventional PIB with dimethylamine or ethylenediamine. Therefore, the unexpected results are still not commensurate in scope with the claims and are not sufficient to rebut the *prima facie* case of obviousness.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1775

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LATOSHA HINES whose telephone number is 571-270-5551. The examiner can normally be reached on Monday thru Thursday from 8 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Marcheschi can be reached on 571-272-1374. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LATOSHA HINES/  
Examiner, Art Unit 1775

/Ellen M McAvoy/  
Primary Examiner, Art Unit 1771